

Name:

Date:

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PART A In the space on the left, write the letter of the term or phrase which **best** completes the statement or answers the question (1 mark each).

- _____ 1. The smallest divisions of the biosphere are called ...
 - a. species
 - b. population
 - c. ecosystems
 - d. organisms

- _____ 2. Organisms that can make their own food are called ...
 - a. consumers
 - b. herbivores
 - c. autotrophs
 - d. heterotrophs

- _____ 3. The branch of science that deals with the interactions of organisms and their environments is ...
 - a. biology
 - b. ecology
 - c. environmental biology
 - d. zoology

- _____ 4. What is the best indicator of the health of an ecosystem?
 - a. the biodiversity
 - b. the plant life
 - c. the animal life
 - d. the biotic conditions

- _____ 5. A symbiotic relationship in which both organisms benefit is called ...
 - a. mutualism
 - b. commensalism
 - c. predation
 - d. parasitism

- _____ 6. Organisms that feed on waste material are called ...
 - a. producers
 - b. omnivores
 - c. detritivores
 - d. consumers

- ___ 7. Biotic organisms can be ordered in an ecological hierarchy such as (from smallest to largest):
a. organism, community, ecosystem, and population
b. organism, ecosystem, population, and community
c. organism, community, population, and ecosystem
d. organism, population, community, and ecosystem
- ___ 8. A(n) ___ is all the members of a particular species within an ecosystem.
a. organism
b. community
c. biome
d. population
- ___ 9. Many plants obtain food through a process called ...
a. photosynthesis
b. mutualism
c. predation
d. commensalism
- ___ 10. Which type of food pyramid shows the population of each trophic level?
a. food web
b. pyramid of numbers
c. pyramid of energy
d. pyramid of biomass

PART B In the space provided mark each of the following as true or false. (1 mark each)

- ___ 1. A niche is the place in which an organism lives.
- ___ 2. Decomposers can't prevent the spreading of diseases.
- ___ 3. Organisms within communities interact to obtain resources
- ___ 4. All food pyramids are shaped like a pyramid: they are smaller at the top than at the bottom.
- ___ 5. Biosphere is another name for the Earth as an ecosystem.
- ___ 6. Water and oxygen are biotic components of the environment that are essential for survival.
- ___ 7. Herbivores are at the very bottom of the food chain.
- ___ 8. Soil provides nutrients for plants and supports many species of small organisms.
- ___ 9. Abiotic components of an ecosystem support the life functions of the biotic components.
- ___ 10. In mutualism, both species benefit.

PART C In the space provided, match each term or phrase with the best definition. (1 mark each)

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| ___ 1. Parasitism | A. Provide the soil with nutrients. |
| ___ 2. Predation | B. Relationship between two organisms in which both organisms benefit. |
| ___ 3. Decomposers | C. Occupy the first trophic level. |
| ___ 4. Biotic | D. Relationship where one species benefits and the other is not harmed. |
| ___ 5. Mutualism | E. The special role an organism plays in an ecosystem. |
| ___ 6. Producers | F. Occupy all levels except the first trophic level. |
| ___ 7. Abiotic | G. Relationship in which one species benefits and another is harmed. |
| ___ 8. Consumers | H. Relating to non-living parts of an environment. |
| ___ 9. Niche | I. Relating to living parts of an environment. |
| ___ 10. Commensalism | J. Relationship where one organism eats all or part of another organism. |

PART D Each of the following questions requires a short answer.

1. What are detritivores? How are they related to decomposers and how do decomposers lead to biodegradation? (3 marks)

2. Name three kinds of symbiotic interactions that can occur within ecosystems. (3 marks)

3. Describe plants, herbivores and carnivores in terms of trophic levels (3 marks).
4. How do pyramids of energy, biomass, and numbers differ? (3 marks)
5. Explain how predator-prey cycles work. Start with what occurs when prey populations decrease. (3 marks)
6. Name three abiotic factors that affect an ecosystem. (3 marks)
7. How does a food web differ from a food chain? (2 marks)